



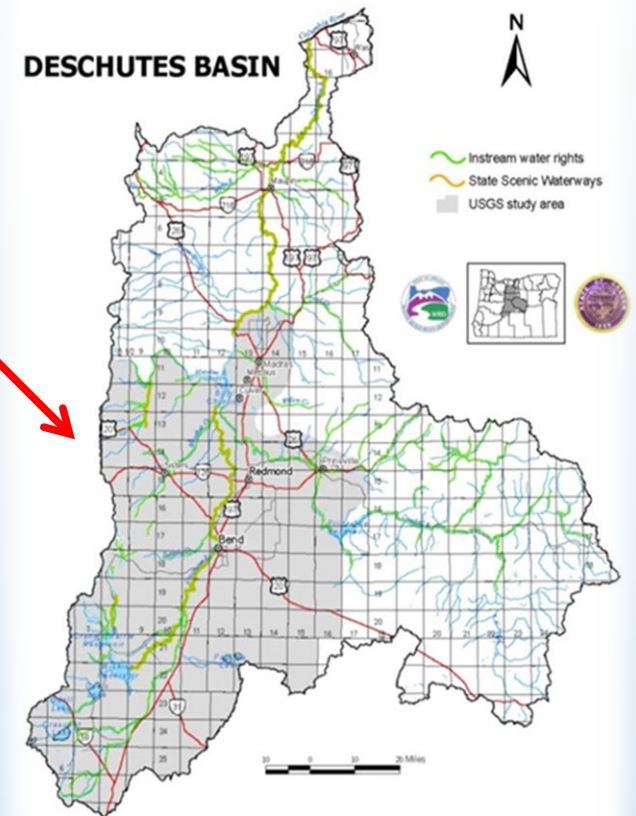
Deschutes Basin Mitigation Program

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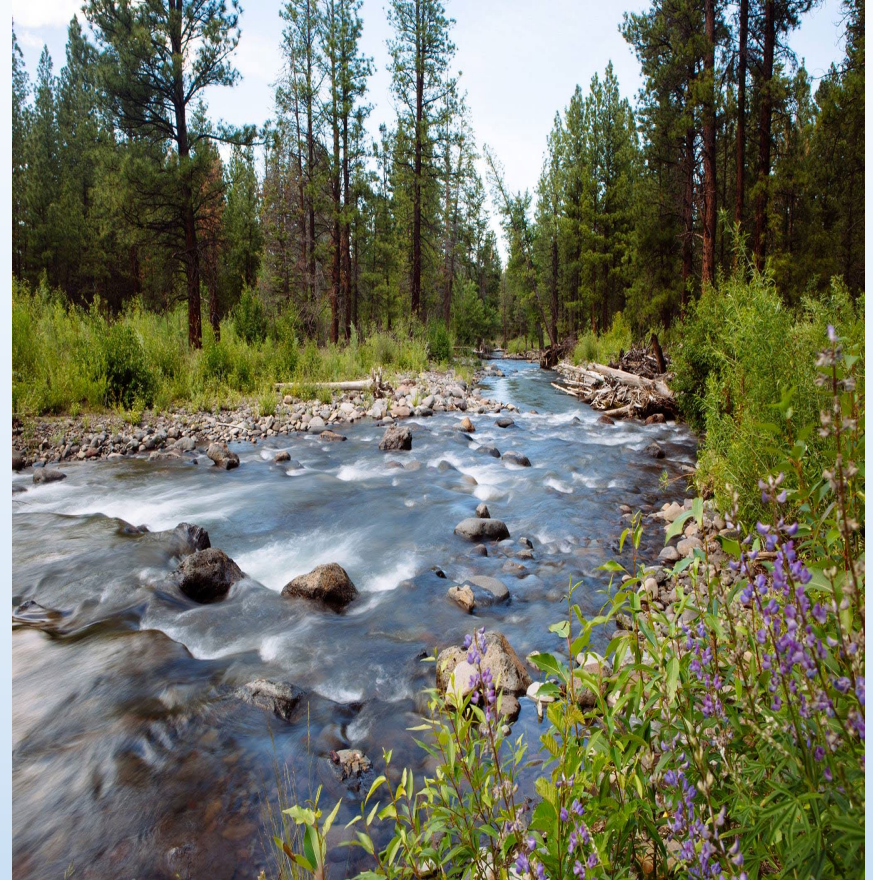
History and Background

- Deschutes Basin Ground Water (GW) Study
- Direct hydrologic connection
- State scenic waterway flows
- No surface water available
- Mitigation Program developed



Mitigation Program Goals

- Maintain scenic waterway and instream water right flows
- Accommodate growth through new ground water development and sustain exiting uses
- Facilitate restoration of flows in Middle Deschutes River and tributaries

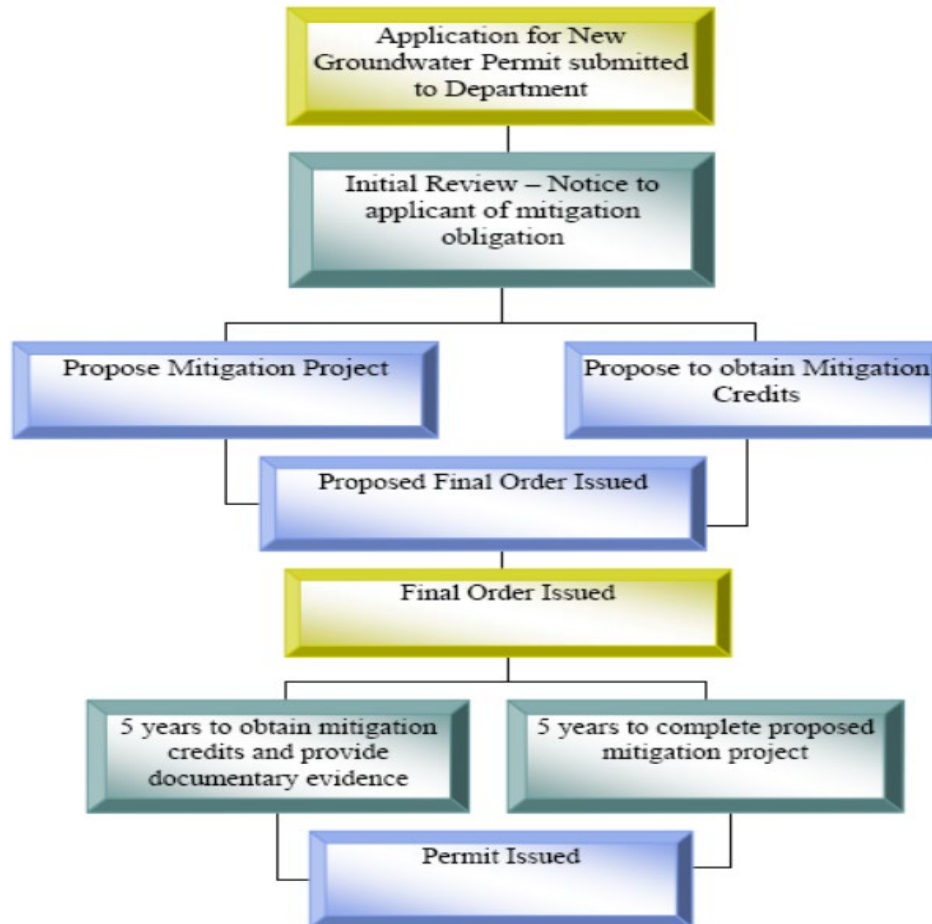


Whychus Creek

Elements of Mitigation Program

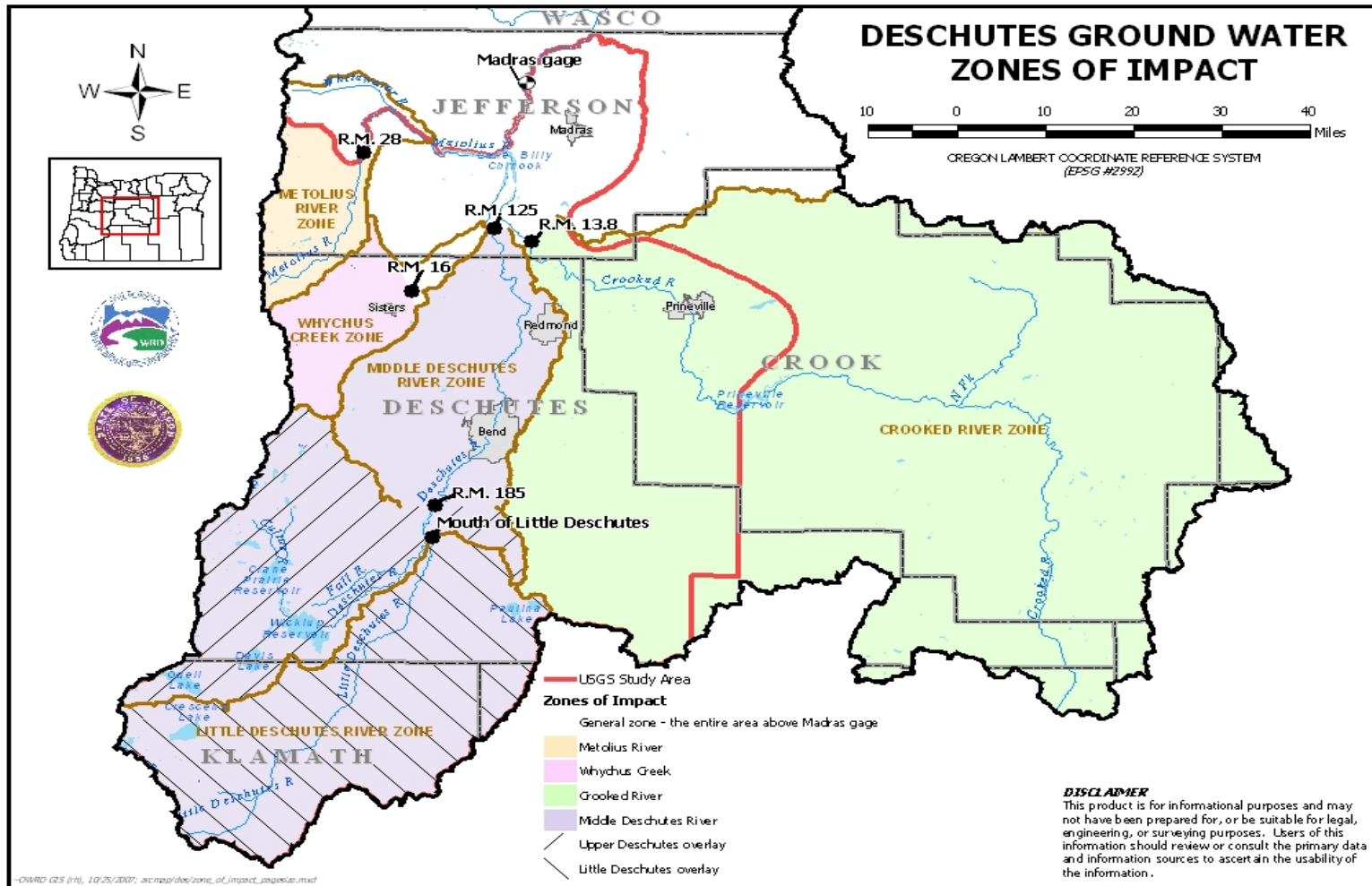
- New GW permits require surface water mitigation for impacts on surface water
 - Does not mitigate for impacts on groundwater resources
 - Does not require mitigation for water right exempt wells
- Identifies tools for providing surface water mitigation
- Establishes a system of mitigation credits
- 200 Cubic Feet per Second (CFS) allocation cap
- Provides for establishment of mitigation banks
- Requires annual and 5-year evaluations

Establishing New GW Uses





Zones of Impact



New GW Use Evaluation

- Amount of mitigation required
 - Use assumptions of consumptive use, for example:
 - Domestic Use = 20%
 - Municipal Use = 40%
 - Irrigation Use = 1.8 AF per acre
- Location of the Zone of Impact
- Mitigation must be committed for life of GW use

Ways to Provide Mitigation

- Complete a mitigation project
- Obtain existing mitigation credits



Upper Deschutes River (flow is about 1200 cfs 9-4-18) shows the high banks and ash layer in the sediment

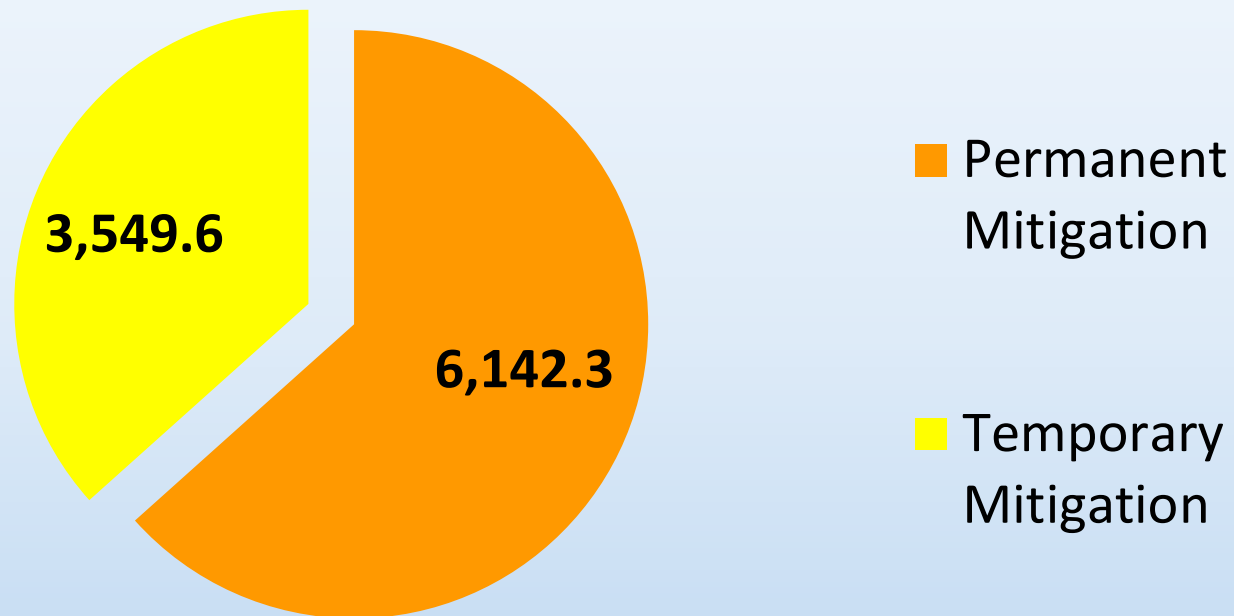
Mitigation Project Types

- Permanent mitigation projects
 - Instream Transfer
 - Allocation of Conserved Water
 - Performance dependent mitigation
 - Storage releases
 - Aquifer Recharge
- Temporary mitigation projects
 - Time-limited instream transfer
 - Instream Lease

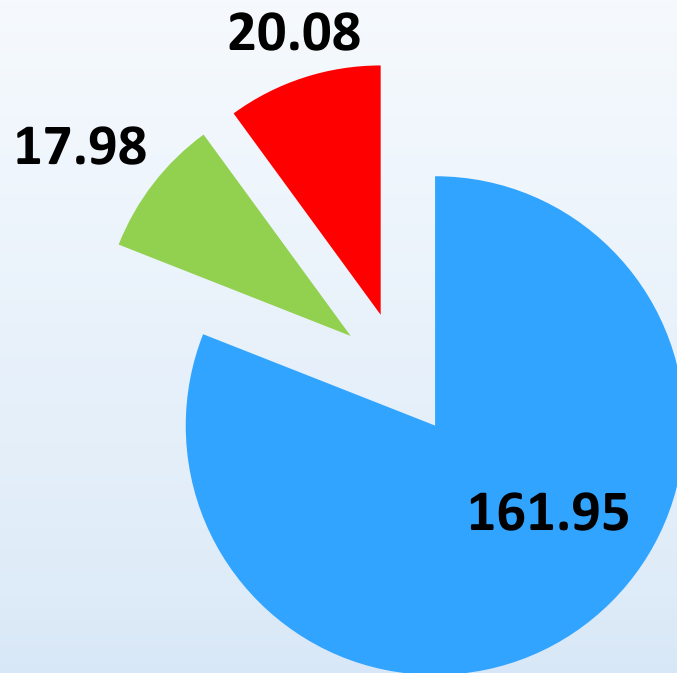
Mitigation Credits - End of 2019

- 46 permanent instream transfers
- 26 temporary instream leases (2019 only)

Volume in Acre-Feet



Allocation Cap Status - End of 2019



■ Total CFS Allocated

■ CFS Pending Applications

■ CFS not yet applied for

Groundwater appropriations

- 131 active permits
- 26 certificated
- 18 pending applications

Streamflow Model & Monitoring

- Base period of 1966 to 1995 at selected gaging stations
- Considers new groundwater uses and mitigation projects on streamflows

Gage Site	Base Line Percentage of Time Instream Requirements are met	Change in Percent of Time Instream Requirements are met
Deschutes River at Mouth	96.2	0.08
Deschutes River below Pelton Dam	69.3	0.81
Metolius River at Lake Billy Chinook	99.7	0.00
Deschutes River at Lake Billy Chinook	99.3	0.63
Deschutes River at Lower Bridge (Downstream of Bend)	28.6	-0.21
Deschutes River above diversion dam at Bend	67.4	-0.11

Mitigation Bank Establishment

- Allowed by rule and statute - Specific to Deschutes Basin)
- Must file an application with the Department
- Authorized by Charter Agreement, must be approved by OWRD's Commission
- Charter Agreement goes through public process prior to approval by Commission
- Currently three mitigation banks; one active

Thank you – Questions?

